
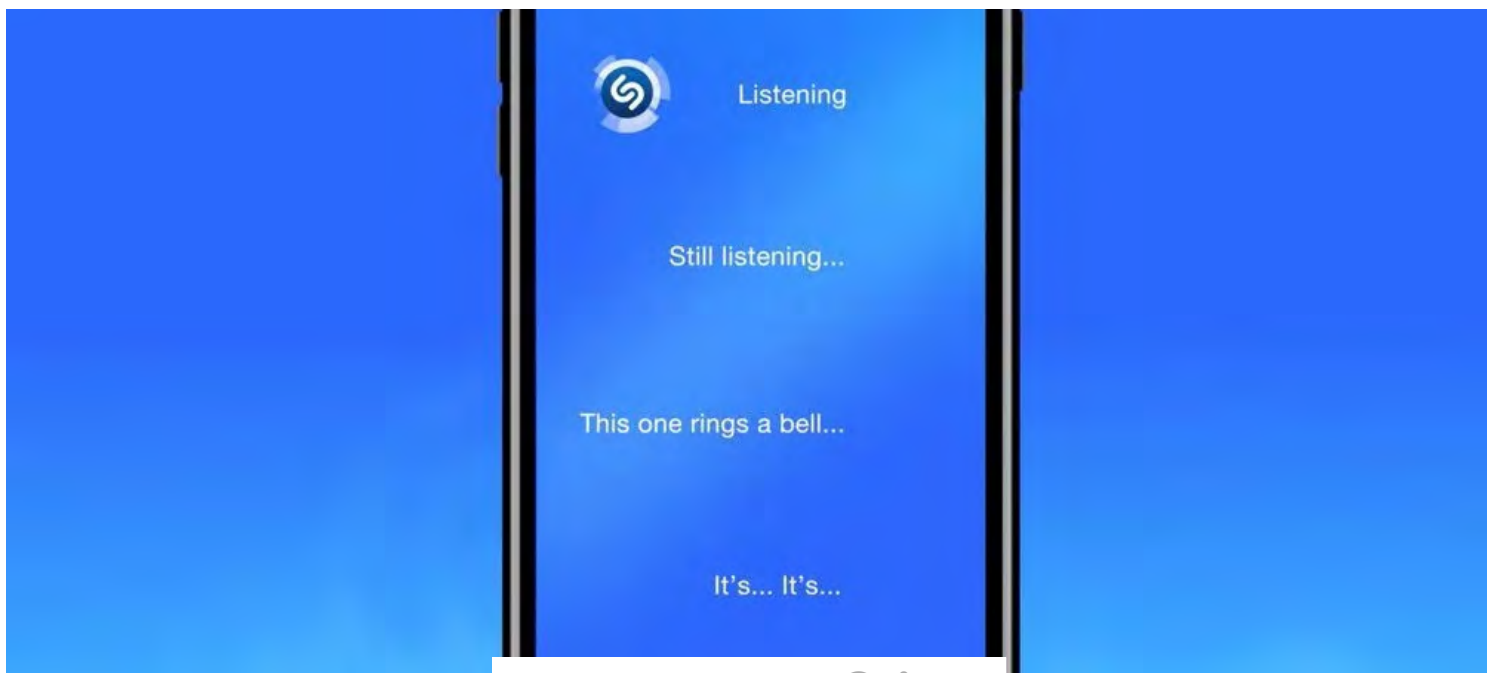


# EXHIBIT E

FEBRUARY 20, 2019

## Apple removes almost all third-party SDKs from Shazam after making it ad-free

Chance Miller - Feb. 20th 2019 3:53 pm PT  @ChanceHMiller



10 Comments     

Shortly after its [acquisition of Shazam last year](#), Apple took the music tagging application ad-free. To follow-up on that change, Apple has now removed nearly all third-party SDKs from the app as well.

Apple last week released a small update to the [Shazam app on iOS](#), with the change log indicating that the update included “bug fixes and performance improvements.” [AppFigures](#) has now discovered, however, that the update also removed nearly all of the third-party SDKs that the Shazam app was using.

Apple has removed the following SDKs from Shazam: AdMob, Bolts, DoubleClick, Facebook Ads, Facebook Analytics, Facebook Login, Inmobi, IAS, Moat, and Mopub.

Following this update, only Microsoft’s HockeyApp SDK remains in Shazam for iOS. This is essentially Microsoft’s version of TestFlight and it’s unclear why it hasn’t yet been removed, but that could change soon.

Meanwhile, the Shazam app for Android still features many third-party SDKs including Bolts, Facebook Analytics, Butter Knife, Crashlytics, Fabric, Firebase, Google Maps, OKHTTP, and OTTO. Whether or not Apple ends up removing those third-party SDKs from Shazam for Android remains to be seen.

On iOS, it shouldn’t come as too big of a surprise that Apple is removing SDKs from Shazam. Apple has firmly expressed its distaste for third-party SDKs that share user data, which many of these do.

### Related stories:

- [Apple confirms rumored Shazam acquisition, says it has “exciting plans in store” for Apple Music](#)
- [Apple closes Shazam acquisition, takes music tagging service ad-free](#)
- [Apple-owned Shazam for iOS updated with Instagram Story integration](#)
- [Apple offering custom ‘Grammy Awards experience’ and 4 months free of Apple Music via Shazam](#)

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[Hide this message](#)**Jeroen** • 2 years ago • edited

Interestingly, the only non-monetisation framework that got removed is the Bolts framework, which basically is a framework (developed by Parse and Facebook) that provides the functionality of chaining promises (tasks/closures). I assume that



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**Minas Keshishyan** ➔ Jeroen • 2 years ago

Bolts was used by Facebook SDKs I guess.

1 ^ | ▾ • Share ›

**dozazz** • 2 years ago

Ad-free unless it's an Apple Music ad. Ha!

2 ^ | ▾ • Share ›

**Eric** • 2 years ago • edited

Surprised they still have Spotify/etc.

2 ^ | ▾ • Share ›

**Pedro** ➔ Eric • 2 years ago

Keeping Spotify on the platform allows Apple to convert their customers to Apple Music. If anything, I expect Spotify to pull itself from Shazam.

1 ^ | ▾ • Share ›

**Ian** ➔ Eric • 2 years ago

True, but if they remove Spotify from Shazam you could find the user deleting the App.

Then they wouldn't receive any data from the user.

^ | ▾ 1 • Share ›

**iSub** • 2 years ago

Shazam hasn't identified songs as well as it used to since Apple bought it...

^ | ▾ 3 • Share ›

**Robert Wilson** ➔ iSub • 2 years ago

I've never used it. I've always have used sound hound to get info of a song.

1 ^ | ▾ • Share ›

**DaveN** ➔ iSub • 2 years ago

Do you think that is a statistical variation or a change in the algorithm? I haven't used the program so I am just

